

Claims:

1. An isolated nucleic acid molecule encoding a CB1b receptor, said nucleic acid molecule comprising a nucleotide sequence having at least 95% identity to a degenerate variant of SEQ ID NO: 1.
2. An isolated nucleic acid molecule encoding a CB1b receptor, said nucleic acid molecule comprising a nucleotide sequence having at least 95% identity to SEQ ID NO: 1.
- 10 3. An isolated nucleic acid molecule encoding a CB1b receptor comprising a nucleotide sequence of SEQ ID NO: 1.
4. The isolated nucleic acid molecule of claim 1, said nucleic acid molecule consisting of a nucleotide sequence of SEQ ID NO: 1.
- 15 5. An isolated nucleic acid molecule encoding a CB1a receptor comprising the amino acid sequence of SEQ ID NO: 2, or a sequence with 95% sequence identity thereto.
6. The isolated nucleic acid molecule of claim 5, wherein the nucleotide sequence encodes a polypeptide sequence consisting of the amino acid sequence of SEQ ID NO: 2
- 20 7. The nucleic acid molecule of claim 5, said nucleic acid molecule comprising a nucleotide sequence having at least 95% identity to a degenerate variant of SEQ ID NO: 1.
- 25 8. A vector comprising the nucleic acid molecule of claims 1 or 5.
9. A host cell comprising the vector of claim 8.
10. The cell of claim 9, wherein the cell expresses a polypeptide encoded by the nucleic acid molecule.
- 30 11. A purified polypeptide of the CB1b receptor comprising an amino acid sequence having at least 95% identity to the amino acid sequence of SEQ ID NO: 2.

12. The purified polypeptide of claim 11, wherein the amino acid sequence comprises the amino acid sequence of SEQ ID NO: 2.

5 13. A method for producing a CB1b receptor comprising:

- a) culturing the host cell of claim 9 under conditions whereby said receptor is produced, and
- b) recovering the receptor from the host cell culture or culture medium.

10 14. A method for detecting a polynucleotide which encodes a CB1b receptor in a biological sample comprising:

- a) contacting a probe capable of selectively hybridising to CB1b nucleic acid with nucleic acid material of a biological sample, thereby forming a hybridization complex; and
- b) detecting the hybridization complex, wherein the presence of the complex correlates with the presence of a polynucleotide encoding a CB1b receptor in the biological sample.

15 15. A method for detecting a polynucleotide which encodes a CB1b receptor in a biological sample comprising:

- a) PCR amplification of nucleic acid from the biological sample using primers that hybridise either side of the 99 base deletion found in CB1b relative to CB1;
- b) amplifying up the target region; and,
- c) detecting the presence of a polynucleotide which encodes a CB1b receptor on the basis of the size of amplified product generated in step (b).

20 16. A method for identifying a compound which binds to the CB1b receptor, comprising

- a) contacting the polypeptide of the CB1b receptor of claim 11 or 12 with a test compound, and
- b) determining if the receptor binds to the test compound.

25 17. A purified antagonist, agonist, modulator or inverse agonist of the polypeptide of SEQ ID NO: 2.

18. A pharmaceutical composition comprising a substantially purified CB1b receptor inhibitory nucleic acid molecule, said molecule capable of selectively binding to the CB1b nucleic acid, in conjunction with a suitable pharmaceutical carrier.
- 5 19. The pharmaceutical composition of claim 18, wherein the inhibitory nucleic acid molecule is selected from: an antisense, a ribozyme, a triple helix and an RNAi molecule.
20. A pharmaceutical composition comprising an agonist, an inverse agonist, a modulator or an antagonist of the CB1b receptor of SEQ ID NO: 2.
- 10 21. A method for treating or preventing a CB associated disorder comprising administering to a subject in need of such treatment an effective amount of a pharmaceutical composition of claim 19 or 20.
- 15 22. A screening system wherein the modulatory ability of a test compound is determined by screening the compound against a panel of cannabinoid receptors, said panel comprising CB1b and at least one other cannabinoid receptor family member.
23. A screening system of claim 22, wherein the other cannabinoid receptor family member is selected from: CB1, CB1a and CB2.
- 20
24. A screening system of claim 23, wherein the test compound is screened against CB1b and at least CB1 and CB1a.
- 25 25. A screening system of claim 24, wherein the test compound is screened against CB1b and at least CB1, CB2 and CB1a.
26. A method for determining the selectivity of a test compound against a cannabinoid receptor family member, comprising determining the ability of the test compound to modulate each of a panel of cannabinoid receptors, said cannabinoid receptor panel comprising the CB1b receptor and at least one other cannabinoid receptor selected from: CB1, CB2 and CB1a.
- 30

- 26 -

27. The method of claim 26, wherein a profile of the modulatory ability of the test compound is compiled.

28. (New Claim) A method for identifying a compound which binds to the CB1b receptor,
5 comprising:

- a) contacting the cell of claim 10 with a test compound, and
- b) determining if the receptor binds to the test compound.